CURRICULUM-VITAE

of

Dr. R.K.Soni,
Head
Department of Chemistry
Ch. Charan Singh University, Meerut

CURRICULUM VITAE

Dr. R. K. Soni

Associate Professor
Department of Chemistry
Ch. Charan Singh University, Meerut
Uttar Pradesh, INDIA

PERSONAL DETAILS

Father's Name	:	Late Shri G. C. Soni
D.O.B.	:	31.12.1965
Marital Status	:	Married
Nationality	:	Indian
Address	:	A-4/301, Olive County, Vasundara, Sector-5, Ghaziabad, UP
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AWARDS & RECOGNITIONS

- **Awarded Platinum Jubilee lecture award ISCA 2014 organized at Jammu University, Jammu.**
- **Awarded Best Teacher Award of 2009 of Ch. Charan Singh University conferred by Prof. S. K. Kak, Vice- Chancellor, Ch. Charan Singh University, Meerut & Prof. Ved Prakash, Chairman, University Grant Commission.**
- Awarded Junior Research Fellowship & Senior Research Fellowship by CSIR.

EDUCATIONAL QUALIFICATIONS

- Ph.D. was awarded from Delhi University in 1993.
- Passed Master of Engineering (M.E.) degree in **Polymer Technology** from University of Delhi with DISTINCTION in 1990**.**
- Passed M.Sc (Chemistry) from University of Delhi **in 1988 with**

specialization in Physical Chemistry.

AREA(S) OF INTEREST:-

1. Analytical Chemistry
2. Polymer Science and technology
3. Environnent management (Plastic waste management)
4. Fiber Reinforced composite
5. Technology development and transfer to industries

RESEARCH, ADMINISTRATIVE & TEACHING EXPERIENCE

- **Held an officiating charge on the post of Registrar, Ch. Charan Singh University, Meerut from 1.11.2002 to 14.2.2003.** Also worked as **Reader and Head, Department of Chemistry, Ch. Charan Singh University, Meerut** from 22.9.2002 to 1.1.2006. in the pay scale of Rs. 12000-420-18300. **At present, working as** Associate Professor and Coordinator (PSCT & Biochemistry) and teaching post-graduate students and guiding Ph.D students for their research work since 1.1.2006 in the pay scale of Rs. 37000-67000 with AGP of Rs. 9000.

- Worked on the post of **Lecturer under Directorate of Training & Technical Education, Govt. of Delhi from 19.8.98 to 22.9.02. in the pay scale of Rs. 8000-275-13500 (pre-revised).**

- Worked as **Senior Scientific Officer-I and Senior Scientific Officer-II in Delhi College of Engineering from 22.4.93 to 18.8.98 in the pay scale Rs. 2200-4000 (pre-revised) and Rs. 3000-4500 (pre-revised) respectively**. During this period I taught Master of Engineering students. Excellent research work performed and Ph.D students were guided to perform their research work and developed different technologies for industries.

- Performed an excellent research work from 22.8.88 to 21.4.93 during the period of obtaining M.E degree and while performing the duties of Junior Research Fellowship and Senior Research Fellowship awarded by Council of Scientific and Industrial Research, New Delhi at Delhi College of Engineering. During the tenure of the work, I also taught B.E. and M.E. students and guided ME students for their major project.

RESEARCH PAPERS PRESENTED /ACCEPTED /COMMUNICATED FOR PUBLICATION

Excellent research work carried out during the tenure of different posts mentioned above was published in the International/ National journals. Some of the research papers were presented in National/ International conferences as per following detail:

1. Studies on Thermal behaviour of Rubber Toughened Bismaleimide Resins: Presented in Eighth National Seminar of Indian Thermal Analysis Society held on 17 - 21 Dec 1990 organized at Bhubhneshwar (India).
2. Studies on the Kinetics of Photo initiated Radical Polymerization of modified Epoxy Resin *Polymer International*, 29(1992) 185-190.
3. Studies on Kinetics of Radical Initiated Photo-co-polymerization of Divinyl (2-hydroxy propanoate). Ether of bisphenol-A and monomers: *Polymer International*, 31(1993) 305-314
4. Studies on Kinetics of Bulk Polymerization of Divinyl Ester by Radical Initiated Thermal and PhotoPolymerisation: *Polymer International*, 31 (1993) 239-245.
5. Stabilization of Polyurethane films against thermal and photo-oxidative degradation, Polymer Degradation & Stability, 39(1993) 93-101.
6. Recent Development in Thermally curable and Photo-curable Systems. *Prog. in Polymer Sc.*, 19 (1994) 137-169.
7. Studies on Jute Fibre Reinforced Composites: Proceedings International Conference on Jute fibers composites and materials Dec 1-2 1994 New Delhi.
8. Recycling and Reuse of PET Waste: Plastic Industry, Vol. XXII, and No 4 March 1995.
9. Present Scenario of Plastic Resin in National and International Market: Sovereign of Federation of Delhi Small Scale Industries Organization 1995.
10. Studies on Kinetics of thermally initiated radical polymerization of Divinyl ester monomers, *Polymer International* 38(1995) 147-152.

11. Design of a New Type of Biogas Plant using Plastic Material, Plastic Industry Vol. XXIV No. 11-12, Nov 1996.
12. Higher Technical and Managerial Education needs of Polymer Industries in India, *J. National Foundation Indian Engineers*, 10(b) (1996) 2-6.
13. Studies on the preparation of Polyester Plasticizers for PVC from PET waste: presented at 5 Asia Pacific Conference on Waste Management (APCRP), Kuala Lumpur, Malaysia, 2004.
14. Estimation of thermodynamics properties and P-H diagrams for NARM of Propane and Isobutane *Bull Pure & Appl. Sc.*, 23C(1) (2004) 65-86.
15. Antifungal effect of the flower extract of *Ageratum Conyzoides* L against *Aspergillus Niger* Van Tiegham *Bull Pure & Appl. Sc.*, 23B(1) (2004) 11-14.
16. FTIR and FT-Raman spectra and thermodynamics of 2,6-difluorobenzonitrile proceed in International Conference on Spectrophysics, 2005, held at Chennai.
17. Synthesis & Characterisation of Terephthalamides from Polyethylene Terephthalate (PET) waste *J. Appl. Polymer Sc.*, 96 (2005) 1515-1523.
18. FTIR studies of ammmonolysed PET waste in the proceedings of ICOPVS-2006, held at Dept. of Chemistry, C.C.S. University, Meerut
19. Vibrational Spectra and thermodynamics of Biomolecules: 5 Chlorocytosine *Indian J. Pure and Appl. Phys*, 44 (2006) 653-660.
20. Studies on reduction of Terephthalamide and charactterisation of p-Xylene diamine by FTIR in the proceedings of ICOPVS-2006, held at Dept. of Chemistry, C.C.S. University, Meerut.
21. Spectroscopic investigation of end products obtained by ammonolysis of Polyethylene Terephthalate Waste in the presence of zinc acetate as catalyst *J. Polymer Res.* 14 (6) (2007) 475-481.
22. The effect of nano-particles on the properties of polymer nano composites - a review accepted for publication in *Progress in Polymer Sc.* (number PPS07054).
23. Studies on Synthesis & Characterization of N Alkyl Terephthalamide using different amines from Polyethylene Terephthalate (PET) Waste *J. Appl. Polymer Sc.* 115 (2009) 3074-3080.
24. Studies on biodegradability of copolymers of lactic acid, Terephthalic acid and ethylene glycol in *Polymer degradation & stability* 94 (3)

(2009) 432-437.

25. A novel route of Synthesis, Characterization of Terephthalic dihydrazine (TPD) from Polyethylene Terephthalic Waste and its applications in PVC compounding of plasticizer in *J. Appl. Polymer Sc.* 113 (2) (2009) 1090-1096.
26. The effect of dynamic crosslinking on mixing torue behavior & tensile yield behavior of Isotactic Polypropylene (iPP)/ Ethylene Propylene Diene rubber (EPDM)/ Nitrile rubber (NBR) electronic blends in *J. of Polymer Research* 17 (2009) 411-427.
27. Novel Studies on Synthesis, characterization & curing kinetics of Bis-aminoethyl generated from Polyethylene Terephthalate Waste with DGEBA. Communicated to *J. of Applied Polymer Science*.
28. Studies on synthesis & characterization of a novel aromatic amide oligomer of aminolysed end-products generated from PET waste with hydrazine monohydrate and its photocuring with acrylate monomer. Communicated to **J. of Applied polymer science,** (2010) Volume 118, Issue 2, 638–645.
29. Copper, Silver and Gold Complexes in Medical Therapy- A Review in *International Journal of Current Chemistry* 1 (2) (2010) 73-80.
30. Platinum, Palladium, Rhodium and Rhenium Complexes as Anticancer Agents- A Review in *International Journal of Current Chemistry* 1 (2) (2010) 81-88.
31. Scanning Electron Microscopic study of PET waste flakes during aminolysis and ammonolysis *Journal of Hazardous Material* 178 (2010) 390-396.
32. Tautomeric and Electronic Properties of Biomolecule 2-Thiocytosine in *International Journal of Current Chemistry* 1 (2) (2010) 119-132.
33. "Kinetic Studies on Cure Kinetics of DGEBA (Diglycidyl Ether of Bisphenol-A) with Terephthalamide Hardening System generated from PET waste" **J. of Research Updates in Polymer Science (2013)**
34. Rubber Toughening of Polypropylene Thermoplastic Vulcanizate (TPV) – A Review. Under Communication.

TECHNOLOGY DEVELOPED

The following industrial important technologies have been developed:

1. Jute Fiber Composites
2. Thermoplastic Elastomers For Footwear Application
3. Rigid Polyurethane Foams for Insulation/Structural
4. Thermoplastic Elastomers for Insulation
5. Impact Modified PVC
6. Easily Conducting Polymers
7. Manufacturing of Unsaturated Polyester Resin from PET waste Binders for Construction
8. Development of Special Grade Polyester Resins
9. Development of Formulation of Special Grade PVC & Blends
10. Development of Special Grade Epoxy Resins
11. Development of Safety & Bullet Proof Glass
12. Development of Thermoplastic Elastomers By Blending Natural Rubber & Polypropylene Polymers.
13. Recycling of Methylacrylate Monomer Regenerated from (Methyl Methacrylate) Waste.

RESEARCH PROJECTS COMPLETED SUCCESSFULLY

FUNDED BY MIN. OF HRD

- Development of Special Grade Polyester Resin for M/S Apex Industries Ltd.
- Development of High Temperature & High Impact Resistant Formulations for Composites.
- Development of PVC formulations for various applications for M/S RK. Plastics Pvt. Ltd.
- Development of special grade epoxy resins for M/s Ravex Plasticizer Pvt.

Funded by UGC

- Completed research project entitled “Recycling & Reuse of PET waste funded by UGC”.
- Completed research project entitled “Studies On Synthesis, Characterization Of Lactic Acid Based Thermosetting Polymers” funded

by UGC.

PATENTS and Technology Transfer to Industry for its Commercialization

The applicant has obtained two patents from TIFAC for 20 years. One application for obtaining patents through Technology Information Forecasting and Assessment Centre, Ministry of Science and Technology, Govt. of India, New Delhi. Now, TIFAC has filed final applications in the office of Controller of Patents.

(1). Patent for technology of "A method of preparing novel organic thermal stabilizers for PVC". Awarded for 20 years
(2). Patent for technology of "A method for the preparation of plasticizers". Awarded for 20 years..
(3) Application for obtaining patent for technology for "A Process for conversion of PET Waste into Terephthalic Acid & monoethylene glycol" Patent Application No. 129/DEL/2006 dt 18/01/2006 filed through TIFAC.

Technology Commercialization

The candidate has successfully transferred the technology for manufacturing of polymeric plasticizer from PET waste to M/S National Moulding Co. Ltd., Calcutta, West Bengal for payment of Rs. 4.13 lacs. The Industry has now signed agreement for commercializing of the technology with Technology Development Board, Ministry of Science and Technology, Govt. of India, New Delhi.

INVITED LECTURES DELIVERED

1. Delivered invited lecture on "A Novel Approach for Recycling & Reuse of EPDM and Natural rubber waste" at Medical university, Sofia, Bulgaria
2. Delivered an invited lecture on "Recycling and Reuse of PET Waste" in Gurukul Kangri University, Haridwar.
3. Delivered an invited lecture on "Synthesis and use of Terephthalic dihydarzide obtained from PET Waste" in National Conference on Greener Aspects of Electrochemistry held in Nov 2007.
4. Delivered an invited lecture on "Technologies available for PET Waste recycling" in an International Conference on "Recycling & Reuse of Materials" held at Kottyam, Kerela in 2009.
5. Delivered an invited lecture on "Challenge before Technology

Development & Technology Transfer to industry by Academia" in an International Conference on "Science Technology and Innovation in Engineering as a contribution to the Country's Competitiveness" held at Santa Marta, Colombia in September 2009 organized by Colombian Association of Engineering Schools.

6. Delivered invited lecture on "Biodegradation" at DAV college, Muzaffarnagar
7. Delivered an invited Lecture on "Plastic Waste Management" in RG Degree College, Meerut in November 2009.

SEMINARS/CONFERENCES ORGANISED

Successfully organized many National and International seminars & conferences.

INTERNATIONAL CONFERENCES/NATIONAL SEMINARS

- **International Conference on Perspectives in Vibrational Spectroscopy** 2006 organised at Department of Chemistry, C.C.S. University, Meerut.
- **International Conference on Green Technologies for Greener Environment** 2010 organised at Department of Chemistry, C.C.S. University, Meerut.
- **National seminar on Ecofriendly Pollution free technology 2010** organised at Department of Chemistry, C.C.S. University, Meerut.
- **International conference on Green technologies and Environment Protection** 2011 held at University of Chemical Technology and Metallurgy in **SOFIA (BULGARIA)** organised by ICE, Bulgaria in collaboration with Department of Chemistry, C.C.S. University, Meerut.
- **International conference "Green Technologies for Environment Rehabilitation"** held at Gurukul Kangri University, Haridwar**,** organized by Gurukul Kangri University, Haridwar in collaboration with Department of Chemistry, C.C.S. University, Meerut.
- **National seminar, "Recent Advancements in Chemistry" RAC 2012** held on 29-30 September, organized at Department of Chemistry, C.C.S. University, Meerut**.**
- National Conference on "Innovations in Science and Technology for inclusive development" organized at Department of Chemistry, C.C.S. University, Meerut in collaboration with ISCA Haridwar Chapter.

GUEST LECTURES

Organized Guest Lectures of experts from all over the World like:

a) **Prof Suresh Bhargava,** from RMIET University, Australia on the topic "Chemistry of Non-metals".

b) by **Dr. Irena Kostova** from Department of Chemistry, Faculty of Pharmacy, Medical University, Sofia, Bulgaria on the topic "Lanthanum Based Cancer Drugs".
c) **Prof. Koo** on the topic "Nano- Structured Materials" from South Korea.
d) **Prof. Venko Beschov, Sofia, Bulgaria**
e) **Dr. Kamlendra Singh** from Department of Biochemistry and Molecular Biology, New Jersey Medical School, New York, USA on the topic "Coordination of Enzymatic Activities of DNA Polymerases" and "Bioinformatics".
f) **Prof. A.K. Bakshi** from Delhi University on the topic "Conducting Polymers".
g) **Dr. S.K. Shukla,** from Delhi University on the topic "Synthesis & Application of Polymers".
h) **Dr. A.P. Mishra,** from Department of Science & Technology (DST), Delhi on the topic, "Non Linear Dynamics".
i) **Dr. O.P. Bhardwaj** from Delhi College of Engineering Delhi on the Topic " Tyre Technology"
j) **"Material Science: Opportunity & Challenges"** by Prof. Ramesh Chandra.

EDITOR-IN-CHIEF

Editor-in-Chief of a newly started International Journal "International Journal of Current Chemistry".

EXPERT/MEMBER

- Expert selection committee for various posts such as lecturer, technical assistant C.C.S University Meerut.
- Member for UGC Expert Committee to review the performance of Saurashtra University, Rajkot, Gujarat during X plan and to evaluate its requirement for XI plan under the Head "General Development grant"
- Member for UGC Expert Committee to review the performance of Sardar Patel University, Vallabh Vidya Nagar, Gujarat during X plan and to evaluate its requirement for XI plan under the Head "General Development grant"
- Expert for the preparing & revision of the syllabus for M.Sc (Polymer

Science & Chemical Technology).

- Expert for the selection of various posts of Delhi Subordinate Service Board.
- Convener, Research Degree Committee, Dept. of Chemistry, Ch. Charan Singh University, Meerut
- Convener, for Board of Studies, for M.Sc. Biochemistry, M.Sc. (PSCT), Ch. Charan Singh University, Meerut
- Member of Academic Council, Ch. Charan Singh University, Meerut.
- Member of Executive Council, Ch. Charan Singh University, Meerut.
- Member for Board of Research Studies, Dr. B. R Amedkar University, Agra

REFERENCES

1. Prof. Ramesh Chandra, Ex-Vice Chancellor, C.C.S. University, Meerut
2. Prof. S. P. Ohja, Vice Chancellor, Ch. Charan Singh University, Meerut
3. Prof. V. K. Gupta, VC, Purvanchal university, Jaunpur